

### ABSTRACT OF THE DISCLOSURE

A method for representing an application programming interface (API) for an object-oriented library includes creating a list of public elements in the library and storing the list. Each public element in the list includes a sublist of all public related elements for the element. According to one aspect, the public elements include classes and interfaces, the public related elements include public superclasses and public superinterfaces, and the library is a Java™ package. According to one aspect, a method for determining a program hierarchy includes receiving an API definition file for an object-oriented library and indicating a first public element is a direct parent of a second public element when the first public element is represented in the sublist for the second public element and the first public element is not represented in the sublist for any other public element listed in the sublist for the second public element. According to another aspect, a method for detecting changes to a program hierarchy includes comparing a first program hierarchy reconstructed from a first API definition file with a second program hierarchy reconstructed from a second API definition file and indicating an error when the first program hierarchy is inconsistent with the second program hierarchy.